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Dear Sir or Madam,

I am writing in response to the FCC request for public comment on questions to be discussed by the Spectrum Policy Task Force, ET Docket No. 02-135.

I am an astronomer, now retired from teaching at Swarthmore College, but still active in research. My special field of research is the interstellar medium, the study of the gas and dust between the stars. Over the more than 40 years of my career, I have watched the field of radio astronomy grow from a crude technology based on the radar work of World War II to a sophisticated science involving large telescopes, extremely sensitive receivers, sophisticated spectrometers, and analyzers with very high time resolution. When I was a student, only one element in interstellar space had been detected -- hydrogen, the simplest and most abundant that exists. Now there are scores of molecules known, including complex molecules containing carbon, the so-called organic molecules. Study of such molecules in many different environments in space, interesting in its own right, has given important insights into the probable chemical evolution in the solar system and the origin of life on earth. Since these molecules emit and absorb radio radiation at specific frequencies or wavelengths, the advances in this field have only been possible because of the foresight of the scientific and technological community, including the FCC, in protecting certain sensitive portions of the spectrum from artificial sources of interference. In addition, our scientific study of the universe has benefited from the establishment of certain geographic areas near radio observatories as radio quiet zones, where interfering radio activity at all frequencies is kept to a minimum.

I hope that as the Spectrum Policy Task Force conducts its studies, the needs of the radio astronomy community will be kept in mind, so that the scientific study of our universe via this technology may continue to be as productive of new knowledge in the future as it has in the past.

Thank you for your consideration of my comment.

Yours Sincerely,

John E. Gaustad

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